WHAT IS CLAIMED IS:

1. A sensor comprising:

a plurality of electrically conductive fibers;

a sensing material coating at least some of the fibers; and

an insulating layer positioned about the plurality of electrically conductive fibers.

2. The sensor of claim 1, wherein the insulating layer forms an analyte barrier that surrounds the conductive fibers.

3. The sensor of claim 2, wherein the analyte barrier defines at least one opening for allowing an analyte to access the sensing material.

4. The sensor of claim 1, wherein the insulating layer comprises an electrical insulator.

5. The sensor of claim 1, wherein the insulating layer comprises polyurethane.

6. The sensor of claim 1, wherein the conductive fibers comprise carbon.

7. The sensor of claim 1, wherein the sensing material includes a redox compound.

8. The sensor of claim 7, wherein the redox compound comprises a transition metal complex with one or more organic ligands.

9. The sensor of claim 7, wherein the sensing material includes a redox enzyme.

10. The sensor of claim 9, wherein the redox enzyme catalyzes the oxidation or reduction of an analyte.

11. The sensor of claim 10, wherein the analyte comprises lactate.

12. The sensor of claim 11, wherein the redox enzyme is selected from the group of lactate oxidase and lactate dehydrogenase.

13. The sensor of claim 10, wherein the analyte comprises glucose.

14. The sensor of claim 13, wherein the redox enzyme is selected from the group of glucose oxidase and glucose dehydrogenase.

15. The sensor of claim 1, wherein the fibers form a sheet.

16. The sensor of claim 1, wherein the fibers are interwoven.

17. The sensor of claim 1, wherein the fibers form a piece of fabric.

18. The sensor of claim 2, wherein the analyte barrier defines a plurality of openings for allowing an analyte to access the sensing material.

19. A retractor device comprising:

a surgical retractor blade; and

a lactate sensor positioned adjacent to the retractor blade for sensing lactate levels in tissue being compressed by the retractor blade, the lactate sensor including: a plurality of electrically conductive fibers;

a sensing material coating at least some of the fibers, the sensing material including a redox compound for oxidizing or reducing lactate; and

an insulating layer positioned about the plurality of electrically conductive fibers.

20. The retractor of claim 19, wherein the lactate sensor engages a surgical pad.

21. The retractor of claim 19, wherein the insulating layer defines a plurality of openings for allowing blood to access the sensing material on the fibers.

22. The retractor of claim 19, wherein the sensing material includes a redox enzyme that catalyzes the oxidation or reduction of lactate.

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